INDUSTRIAL WAS[illegible] INVESTIGATION AND SURVEILLANC[illegible] TATUS REPORT

FIRM NAME Selmier - Peerless Laundry

ADDRESS 907 W Chase TELEPHONE 862-9364

PERSONNEL CONTACTED _____ POSITION _____

_____ POSITION _____

_____ POSITION _____

ACTION INITIATED BY: _____

(1) June 22, 1972 - observation of Track washing into Storm Sewer by R. Lyman.

(2) June 29, 1972 - pictures Taken of grounds and Truck washing.

907 W. CHASE

September 22, 1980

Mr. Karl F. Melberg
American Linen Supply Co.
907 W. Chase
Springfield, Mo. 65803

Dear Mr. Melberg:

This letter will confirm our previous conversations with you concerning the amount of sewage discharged by the American Linen Supply Company. This office is currently investigating all commercial laundries in the City and recently completed the survey of your company.

The results of the investigation will change your present sewer billing rate of 100% of water usage to the following:

A. Evaporation due to ironing and drying

Test results of a water retention study conducted in your plant using a variety of items: sheets; pants and shirts; terry towels; barber towels; and mops, indicate a 55 percent allowance for evaporation is acceptable to this office. The monthly deduction is calculated by determining 55 percent of the monthly laundry, in pounds, and converting it to ccf. Using the monthly laundry figure supplied by your company, the following will be allowed for evaporation.

352,107 lbs. laundry for one month
x .55 water evaporation factor
193,658.8 lbs. water

193,658.8 lbs. water
÷ 8.34 lbs. per gallon water
23,220.4 gallons water

23,220.4 gallons water
÷ 748 gallons per ccf
31.0 ccf

32 ccf per month evaporation deduct for drying and ironing.

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B. Boiler

Install a water meter on the makeup line. Ten (10) percent of boiler makeup water will be deducted from the total water consumption. The 10 percent deduction is taken from linen industry literature for boiler and steam loss.

The sewer instructions outlined above will be effective with the October, 1980, billing.

If you have any questions, please don't hesitate to call.

Yours truly,

Karen A. Chandler
Water Pollution Control Inspector
Surveillance and Enforcement

KAC:js

cc: Robert Schaefer
cc: David Duffield

907 W. CHASE

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE September 22, 1980

DEPARTMENT

Bob Corson and Karen Chandler conducted several tests on evaporation and loss during drying and ironing at American Linen Supply Co. Results of the survey were as follows:

Sheets
274 lbs. after dryer
184 lbs. after presser
90 lbs. water evaporation = 49%

Pants and Shirts
934 lbs. before extractor
544 lbs. after extractor
395 lbs. after dryer
149 lbs. water evaporation = 38%

Terry Towels
220 lbs. after extractor
109 after dryer
111 lbs. water evaporation = 102%

Barber Towels
273 lbs. after extractor
218 lbs. after dryer
173 lbs. after presser
100 lbs. water evaporation = 58%

Mops
1816 lbs. after washer
755 lbs. after extractor
598 lbs. after dryer
157 lbs. water evaporation = 26%

The average percentage of water loss due to evaporation is 55%.

Using average daily poundage figures supplied by the laundry for the months of August 1979 through July 1980 there will be a 32 ccf deduction per month for evaporation.

Signed KRC
Bob Corson & Karen Chandler

SIGNED

907 W. CHASE

AMERICAN LINEN SUPPLY CO.
DIVISION OF
WELCH'S OVERALL CLEANING CO., INC.
907 WEST CHASE STREET
SPRINGFIELD, MISSOURI 65803
PHONE
(417) 862-9364

August 28, 1980

Mr. Robert Corson
Department of Public Works
830 Boonville Avenue
Springfield, Missouri 65802

Dear Mr. Corson:

Listed below are the average daily pounds processed by month for one year through our wash room.

MONTH	AVERAGE DAILY LBS	MONTH	AVERAGE DAILY LBS
Aug 79	19,923	Feb 80	15,234
Sep 79	16,714	Mar 80	16,767
Oct 79	17,087	Apr 80	17,182
Nov 79	15,540	May 80	18,042
Dec 79	15,874	June 80	18,113
Jan 80	15,250	Jul 80	18,550

If any further information is needed, feel free to contact me at 862-9364.

Regards,

Gary Stratton
Office Manager

GS/sls

"It Pays to Keep Clean"

907 W. CHASE

BOD (mg/l)	SS (mg/l)	Volume (gallons)
>63,000	6,380	1000
>64,000	7,960	1000
>63,000	8,820	1000
>64,000	9,130	900
11,200	6,440	700

Average volume/load = (1000+1000+1000+900+700) ÷ 5 =
= 920 gallons/load

Flow charge = $\left(\frac{920\ gal}{750\ gal/cf}\right)$ (.27/cf) = $0.33

BOD

As shown by sand filtration test 37% of BOD is trapped in solids on top of filter such that 63% of BOD is in filtrate

BOD/load = $\frac{(63000+64000+63000)(1000)+(64000)(900)+(11,200)(700}{4600}$

$= \frac{190,000,000 + 57,600,000 + 7,840,000}{4,600} = 55,530\ mg$

(55,530 mg/l)(1 lb/454x10³ mg)(3.78 l/gal)(750 gal/cf) =

346 lbs/cf for average load

$(346 - 1.6)(.63)\left(\frac{920}{750}\right)(.046/cf) = \$12.24$/load

[(347 X .63) − 1.6]

SS

As shown by sand filtration test, 89% of SS is trapped on top of filter such that 11% of SS is in filtrate

SS/load = $\frac{(6,380+7960+8,820)(1000)+(9,130)(900)+(6,440)(700)}{4,600}$

$= \frac{23,160,000 + 8,217,000 + 4,508,000}{4600} = 7,801\ mg/l$

(Nov 76)

$(7{,}801\ mg/l)(1\ lb/451 \times 10^3\ mg)(3.78\ l/gal)(750\ gal/ccf) =$

49 lbs/ccf

$[(49)(.11) - 1.9]\left(\frac{920}{750}\right)(.044/ccf) = \$.19$ /load

Loading onto dump trucks

one $ hours labor to load SS from 5 loads of liquid onto dump trucks

$(5)(3.93)(1.25) = 24.56 \div 5 = \$4.91$/load

(1.3) 25.55 = $5.11

Haul to landfill

2 hours equipment operator to haul SS from 20 loads of liquid to landfill

$(2)(4.13)(1.25) = 10.32 \div 20 = \$0.52$/load

(1.3) 10.74 $0.54

Landfill Charge

5 yd^3 dumping at landfill @ 1.02/yd^3 for 20 loads of liquid

$(5) \times (1.02) = 5.10 \div 20 = \$0.26$/load

Flow	$.33	.33
BOD	$12.24	12.20
SS	$.19	.19
Loading	$4.91	5.11
Hauling	$.52	.54
Landfill	$.26	.26
	$18.45	$16.63

Public works 4-2

February 4, 1977

Sater Sewer & Septic Tank Service
2456 North Kellett Street
Springfield, Missouri 65803

Dear Mr. Sater:

This letter will confirm your conversations with Mr. Schaefer earlier this week, regarding costs for treatment of wastes from Selmier-Peerless (American Linna Supply). As you are well aware, the waste from screening is delivered to the Southwest Wastewater Treatment Plant and there placed on sand filter beds. While the major portion of the solid waste is removed at the surface of the filter, only 37% of the soluable portion is removed in the same operation. The remainder of the soluable waste drains through the filter and is removed by pumping back to (the inlet of) the treatment plant where it is subjected to boilogical treatment to reduce the strength. Considering the cost for treating that portion, plus the cost of actual removal of the solid waste from the filters and landfilling, we have calculated the actual cost involved to the City for five loads already delivered. The average cost for each load was $18.63.

We appreciate very much the continued cooperation you have given the City in an attempt to dispose of various wastes in the most environmentally sound procedure and location possible. We would hope that others would follow the example you have set. Please feel free to call on us for assistance or to answer any questions that you may have at any time.

Yours truly,

Charles H. Criswell
Associate Sanitary Engineer
Water Pollution Control

CHC:mh

ccs: Mr. John R. Nixon, Regional Administrator, Department of Natural Resources
Mr. Robert R. Schaefer, P.E., Superintendent of Sanitary Services

907 W. CHASE

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF Robert R. Schaefer, P.E. DATE November 1, 1976

DEPARTMENT Superintendent of Sanitary Services

Dear Bob,

I have revieded your calculations regarding American Linen supply waste hauled by Sater to the sludge drying beds. By calculating the loads individually, the surcharge differs only slightly downward. I added in a volume charge for a total cost of $113.49, or an average of about $22.70 per load.

However, I am concerned that this line of calculation presupposes that the entire treatment facility and process were utilized for the waste treatment or disposal. On the other hand, if the disposal had been made at a place where secondary treatment did not exist and/or no surcharge existed, there would be no charge for B.O.D. and Suspended Solids (97.4% of the calculated cost) and the volume charge would be minimal. For example, one of our neighboring Cities to the North has a volume charge of 14¢ per ccf. The 6.15 (or 7) ccf would cost $0.98, or about 20¢ per load.

I think its probably fair to say that the drying beds as a simple sand filter, probably offer more treatment than simple primary, but I think not so much as full treatment in a conventional or Kraus activated sludge plant. I think it is questionable that we would charge as much as $20.00 per load. Perhaps it should be somewhat higher than the present $6.00. $12.00 would be easy to handle and would probably not cause Sater or American Linen to go elsewhere (illegal disposal or dump into the sanitary sewer). I think we should remember that Sater is doing us a service. I don't mean to imply that we should offer disposal sites free or at a monitary loss, but neigher should we make it so difficult or expensive that which has tremendous potential to aid us is lost.

a service

SIGNED Charles H. Criswell, Associate Sanitary Engineer, Water Pollution Control

907 W. CHASE

LABORATORY ANALYSES 10/19 19 76

BOD SS ?, #/ccf

American Linen Sols to Sludge Drying Beds

DATE	SAMPLE	BOD mg/l	SS mg/l	pH	COD mg/l	TOC mg/l	C_T mg/l	NH_3-N mg/l	o-PO_4 mg/l	Toxicity (Phenol Coefficient)	gallons	
10/2	Load 1	>63,000	6380	6.01	313.75	39.88		12	6.8		1,000	1.34 ccf
	2	>64,000	7960	5.75	400	49.75		12.8	3.4		1,000	1.34 =
	3	>63,000	8820	5.83	393.75	55.13		22	3.4		1,000	1.34 =
	4	>64,000	9130	6.06	400	57.06		20	3.8		900	1.20 +
	5	11,200	6440	6.00	70	40.25		15.2	3.2		700	0.94 +
		LBS BOD	LBS SS									
	1	524	53						J. Adams			
	2	532	66									
	3	524	73									
	4	478	68									
	5	65	37									
	TOTAL	2123	297								4,600 gal	= 6.15 ccf
		9660	1254								1.66	
5/85	110.80											
	22.16											
				BOD	197.85							
				SS	12.70							
					110	55						
				Vc	2	94						
					113	49	= 22.7	lb/load				

907 W. CEASE

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

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a service

4 hrs laborer to load onto dump truck (6 loads)

(4)(3.93)(1.25) = 19.65

1 equipment operator to haul to landfill (2 loads)

2 hrs

(2)(4.13)(1.25) = 10.33

SIGNED

Charles H. Criswell, Associate Sanitary Engineer, Water Pollution Control

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Assume all solids ~~and BOD~~ are removed on sand filter.

6 hrs laborer to load onto dump truck (6 loads)
(6)(3.93)(1.25) = 29.47 ÷ 6 = $4.91

2 hrs equipment operator to haul to landfill (18 loads)

(2)(4.13)(1.25) = 10.32 ÷ 18 = .57

5 yds^3 dumping at landfill @ 1.02/yd^3 (18 loads)
(5)(1.02) = 5.10 ÷ 18 = .28
Volume charge (1 load)
(1.33)(.27) = .35

$6.11

Mileage (40)(.25) = 10.00 ÷ 18 = .55

BOD	SS	Gallons	
>63,000	6,380	1,000 =	393 lbs/cuf
> 64,000	7,960	1,000	399 lbs/cuf
>63,000	8,820	1,000	393 lbs/cuf
>64,000	9,130	900	399 lbs/cuf
11,200	6,440	700	70 lbs/cuf
		4,600	

(63,000 mg/L)(1lb/454x10^3 mg)(3.78L/gal)(750gal/cuf)
(.00624) = (393 lbs/cuf)

Assume 50% BOD removed in solids

85
87
85
78
11
346 lbs/cuf

~~344 lbs/cuf~~

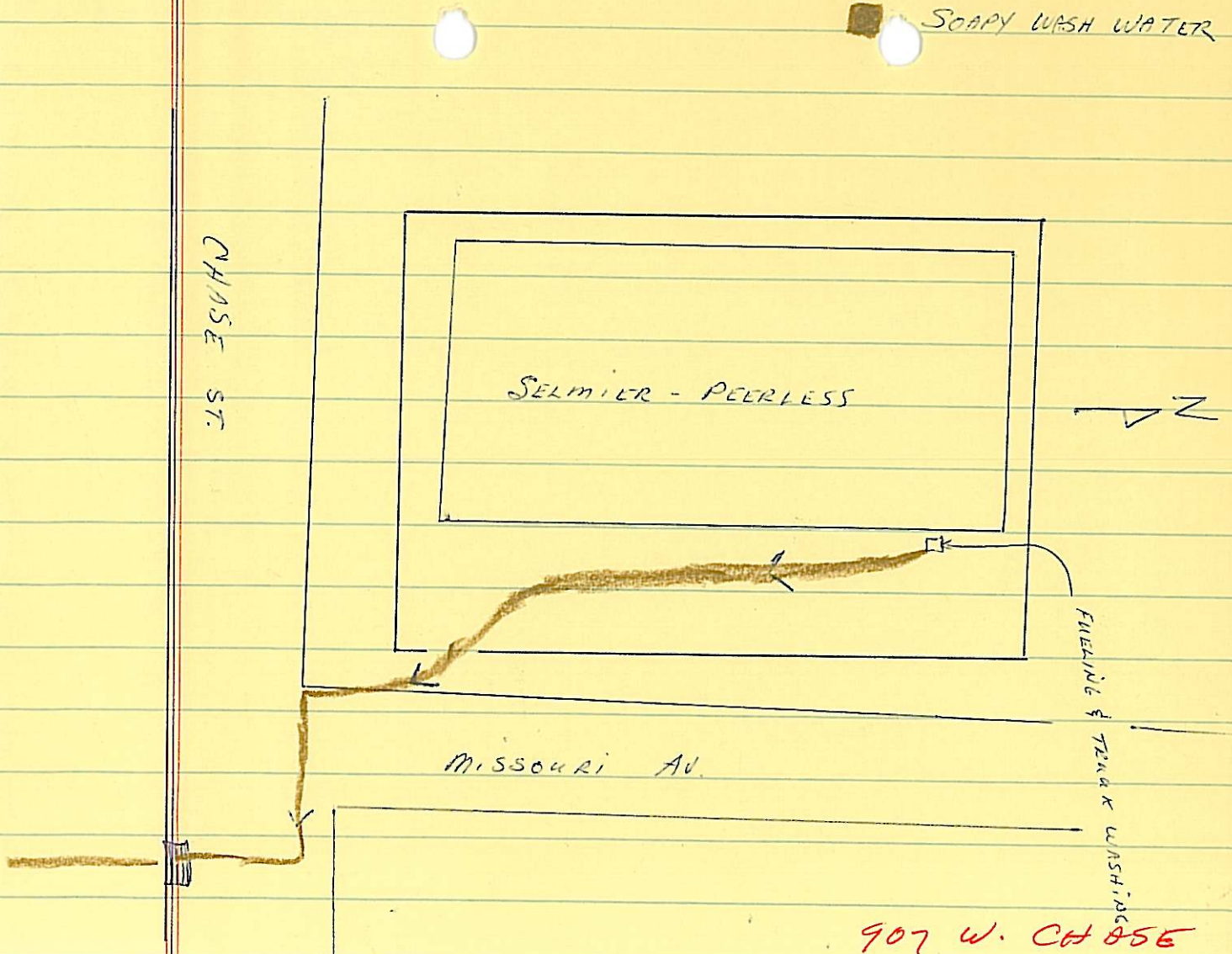
346 ÷ 2 = 173 − 2 =
171 lbs/cuf

Selmier - Peerless Laundry June 22, 1972

At 4:30 P.M. Selmier-Peerless was observed washing trucks on their adphalt lot just east of their building. This wash water runs from the lot into the gutter along tha west side of Missouri Ave. crosses and runs east on Chase Street crosses and enters storm sewer and flows southward. Pictures were taken of the drainage and of trucks being washed and fueled.

Randy Lyman

907 W. CHASE


SOAPY WASH WATER
CHASE ST.
SELMIER - PEERLESS
N
MISSOURI AV.
FUELING & TRUCK WASHING
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